

## **II. REMARKS**

Upon entry of the present amendment, claims 18, 20 to 24 and 48 to 70 will be pending.

Pursuant to the telephone conference with the Examiner, claim 18 has been amended to incorporate the language of previously pending claim 19, which previously was withdrawn from consideration and has been cancelled herein. Claims 20 and 51 to 59 have been withdrawn from consideration, but remain pending. In view of the amendment to claim 18, and the Communication mailed December 18, 2002 (Paper No. 10), the Examiner may wish to consider withdrawing claim 55.

### **A. Regarding the Amendments**

The specification has been amended at Paragraph 1 to correctly indicate that U.S. Serial No. 09/245,615 is "pending". The amendment corrects an error made in a previous amendment, in which it was indicated that the '615 Application was abandoned. As such, the amendment addresses a formality and does not add new matter.

Claim 18 has been amended to incorporate the language of original claim 19, which has been cancelled herein. As such, the amendment is supported by the claims as originally filed and, therefore, does not add new matter.

### **B. Regarding the Drawings**

Formal drawings are being submitted herewith. As such, it is respectfully requested that the objection to the drawings be withdrawn.

### **C. Prior Art Rejections**

The rejection of claims 18, 21, 23, 24, 48, 49, and 60 to 62 under 35 U.S.C. §§103(a) as allegedly obvious over Ekins et al. in view of Yates et al. is respectfully traversed.

It is stated in the Office Action that Ekins et al. describe methods to detect proteins via multianalyte microspot immunoassays using an array of antibodies, but does not describe generating binding patterns for comparison. Yates et al. is provided as describing evaluating binding patterns, including using antibody-protein binding to measure cellular proteins, wherein the protein pattern or fragment is compared with database information. It is stated that, while the references are silent to cell proteins being evaluated in a cell lysate, Yates et al. is considered to read on cell lysates because the reference teaches protein digestion. As such, it is alleged that the claimed invention would have been obvious.

Applicants point out, however, that neither Ekins et al. nor Yates et al. teaches or suggest an array of uncharacterized antibodies, as required by the claims. Where Yates et al. discuss antibodies, for example, it is with respect to producing an antibody to a specific region of protein (see paragraph bridging columns 17-18). Thus, the antibodies described by Yates et al. are "characterized" in that they are produced with respect to a specific region of a protein. Since the cited references, either alone or in combination, do not teach or suggest an array of uncharacterized antibodies, they could not have rendered the claimed methods obvious. Accordingly, it is respectfully submitted that this rejection is not relevant with respect to the amended claims.

The rejection of claims 22, 50, 63, 69, and 70 under 35 U.S.C. §103(a) as allegedly obvious over Ekins et al. in view of Yates et al. and further in view of Cupo is respectfully traversed.

The Ekins et al. and Yates et al. references are relied on as set forth above. Cupo is combined as teaching a two-dimensional polyacrylamide gel electrophoresis procedure to measure matrix proteins. As discussed above, however, the Ekins et al. and Yates et al. references are defective in failing to teach or suggest an array of uncharacterized antibodies. Cupo does not teach or suggest an array of uncharacterized antibodies and, therefore, does not provide that which is missing in Ekins et al. and Yates et al. As such, it is submitted that the

references, either alone or in combination, do not teach or suggest the claimed methods and, therefore, would not have rendered the claimed invention obvious. Accordingly, it is respectfully submitted that this rejection is not relevant with respect to the amended claims.

The rejection of claim 68 under 35 U.S.C. § 103(a) as allegedly obvious over Ekins et al. in view of Yates et al. and further in view of Cupo is respectfully traversed.

Ekins et al., Yates et al., and Cupo are relied on as set forth above. It is stated in the Office Action that, while the modification with respect to examining an arterial endothelial cell lysate as compared to a venous endothelial cell lysate is not taught in the cited references, the modification is "a mere design choice and optimization". As discussed above, however, the Ekins et al., Yates et al. and Cupo references are defective in failing to teach or suggest an array of uncharacterized antibodies. As such, absence objective evidence of the use of uncharacterized antibodies in an array according to a method of the invention, it is submitted that the claimed invention would not have been obvious. Accordingly, it is respectfully submitted that this rejection is not relevant with respect to the amended claims.

The rejection of claims 55 and 64 to 67 under 35 U.S.C. § 103(a) as being unpatentable over Ekins et al. in view of Yates et al., and further in view of Kauvar is respectfully traversed.

Ekins et al. and Yates et al. are provided for the reasons set forth above. Kauvar is provided as teaching methods of characterizing drugs (proteins) via antibody arrays comprising different binding affinities. As discussed above, however, Ekins et al. and Yates et al., either alone or in combination, do not teach or suggest an array of uncharacterized antibodies. Kauvar describes methods for selecting antibodies having specific affinities (see., e.g., column 3, lines 24-37), thus providing characterized antibodies, but does not teach or suggest the use of an array of uncharacterized antibodies as required by the claims and, therefore, does not provide the teaching missing absent Ekins et al. and Yates et al. As such, it is submitted that the claimed

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invention would not have been obvious in view of the cited references and, therefore, respectfully submitted that the rejection is not relevant with respect to the amended claims.

In view of the amendments and the above remarks, it is submitted that the claims are in condition for allowance, and a notice to that effect respectfully is requested. The Examiner is invited to contact Applicants' undersigned representative if there are any questions relating to this application.

If any additional fee is deemed necessary in connection with the filing of the present Amendment, the Commissioner is authorized to charge (or credit) Deposit Account No. 50-1355.

Respectfully submitted,

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